

PERAC HOSTS CHAPTER 68 MEETINGS

PRIM Officials Join PERAC in Explaining New Asset Law

On September 10, 2007 PERAC hosted meetings for retirement board officials, staff, and consultants to provide further information on Chapter 68 of the Acts of 2007, AN ACT TO REDUCE THE STRESS ON LOCAL PROPERTY TAXES THROUGH ENHANCED PENSION FUND INVESTMENT. The Act passed the General Court and was signed by the Governor on July 25, 2007. Chapter 68 provides for the transfer of retirement board assets to the Pension Reserves Investment Trust (PRIT) Fund if they are "found by the commission to have a funded ratio of less than 65 per cent and an average rate of return during the previous 10 years that is at least 2 percentage points less than that of the PRIT Fund rate of return over the same period."

The purpose of these meetings was to outline PERAC's regulatory plans on implementing the statute and to offer retirement boards the opportunity to question both PERAC staff and Pension Reserves Investment Management (PRIM) Board officials about the transfer process and related matters. PERAC's Executive Director Joseph E. Connarton

hosted the meeting and the PERAC regulatory presentation was offered by Deputy Executive Director Joseph I. Martin. Attending from PRIM were Executive Director Michael Travaglini and Senior Client Services Officer Michael Reardon who explained PRIM's procedures in accepting assets received both voluntarily and by order under the Act. Issues such as liquidation procedures and related fees were outlined.

For more information contact PERAC's Deputy Executive Director Joseph I. Martin at 617-666-4446, ext. 920.



Left to right: Michael Reardon, PRIM Senior Client Services Officer; Michael Travaglini, PRIM Executive Director; Joseph E. Connarton, PERAC Executive Director; and Joseph I. Martin, PERAC Deputy Executive Director

THE CREDIT CRUNCH OF 2007

By Robert A. Dennis, CFA
Investment Director

What was behind the extraordinary market volatility and turmoil that gripped and transfixed the financial markets during August? If it can be attributed to a single factor, perhaps the most important one would be "liquidity" and to the observation once made by financier Michael Milken. "Liquidity is an illusion. It is always there when you don't need it and rarely there when you do."

The recent credit crunch showed that there has been a fundamental misunderstanding of liquidity by many in the financial community. Liquidity has traditionally referred to the possession of actual cash or cash-like instruments. In recent times, however, liquidity has been falsely seen as credit, which is the expectation of having easy access to cash.

Liquidity is very dependent on perceptions of credit risk. When perceptions of

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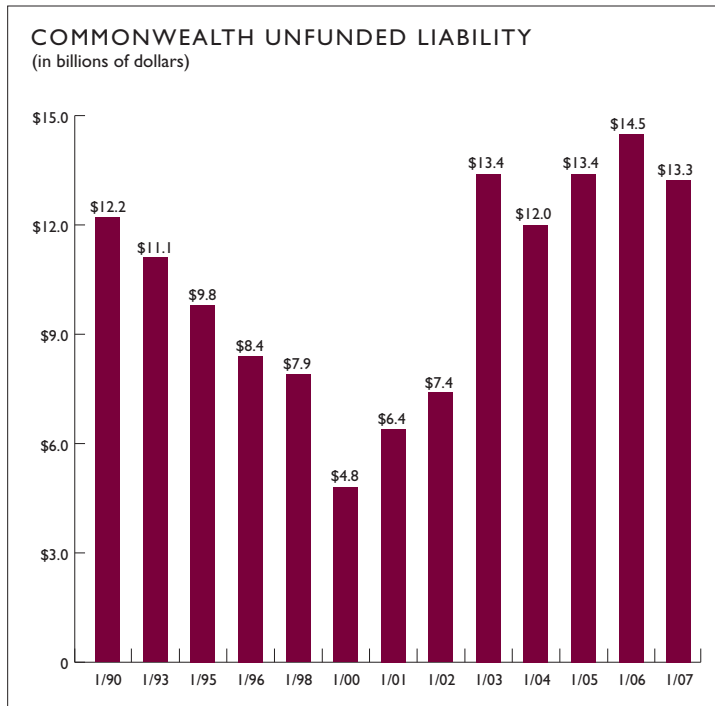
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2007 COMMONWEALTH VALUATION STUDY

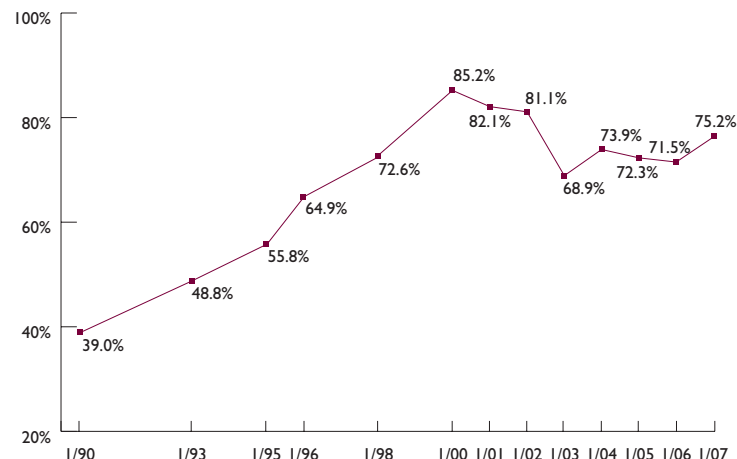
By James Lamenza
Actuary

Three charts from the 2007 Commonwealth Valuation Report are presented in the column to the left. The bar chart shows the Commonwealth's unfunded actuarial accrued liability (UAL) since 1990. The UAL represents the actuarial accrued liability less the actuarial value of plan assets. When there is no UAL, a system is said to be "fully funded." Although the UAL, as of January 2007, was slightly higher than it was in 1990, assets have increased much more rapidly than the actuarial liability. For this reason, the funded ratio represents a better measure of the plan's funding progress. The funded ratio represents the actuarial value of plan assets divided by the actuarial accrued liability. When the funded ratio reaches 100%, a system is "fully funded." The *Commonwealth Funded Ratio* chart shows progress made since 1990.

As part of the 1998 actuarial valuation, an asset smoothing methodology was adopted to reduce the potential volatility of the market value basis. The market value is compared with the actuarial value (smoothed value) of assets in the *Comparison of Asset Methodologies* chart. In some years, the market value of assets exceeds the actuarial value of assets. In other years, the market value of assets is less than the actuarial value of assets. Notice how the lines in the chart have crossed over twice since 1998 and there has been more volatility for the market value.

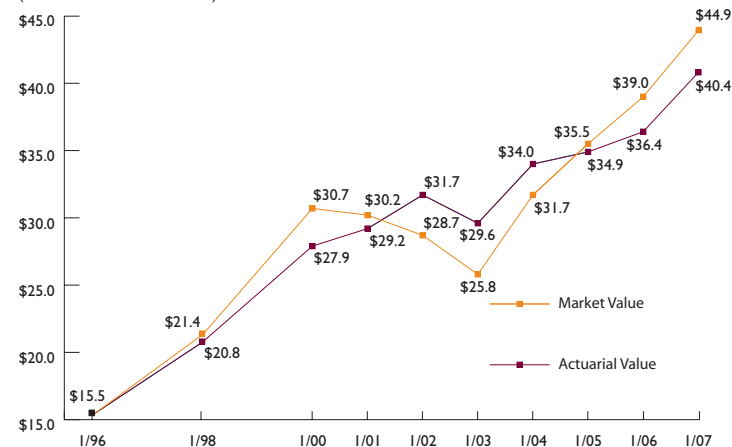
About 75 of the local systems use an asset smoothing methodology. We encourage the use of asset smoothing as a way to reduce the potential volatility in appropriation levels that can be experienced under a market value approach.

COMMONWEALTH FUNDED RATIO



COMPARISON of ASSET METHODOLOGIES

(in billions of dollars)



STATE RETIREMENT SYSTEM EXPERIENCE STUDY

PERAC completed its second experience study of the State Retirement System and published it on July 27, 2007. This study presents the results of the Commission's experience analysis for members of the State Retirement System over the six-year period from January 1, 2000 through December 31, 2005.

The second experience study does not reflect any major changes in the assumptions that had been used in the Commission's first experience study of the Statement Retirement System for the period of January 1, 1995 through December 31, 1999 (published in October 2000). Both experience studies are posted in the Publications Section of PERAC's Website: www.mass.gov/perac.

MOTOR VEHICLE REGULAR COMPENSATION CASE IN STATE APPEALS COURT

By Judith Corrigan
Deputy General Counsel

The first of the motor vehicle cases to make its way through the court system is now awaiting oral argument in the Appeals Court of Massachusetts. *Pelonzi and PERAC v. Beverly Retirement Board and CRAB*, No. 2007-P-0594, involves the claim of Kenneth Pelonzi, who retired from his positions as Public Safety Commissioner and Fire Chief of the City of Beverly in 2002. He sought to have the personal use of his employer-supplied motor vehicle included in his regular compensation for retirement purposes. The Beverly Retirement Board originally included it in his retirement allowance, and then disallowed it

after the Division of Administrative Law Appeals (DALA) ruled against the practice in a similar case.

Mr. Pelonzi sought to have that portion of his retirement allowance reinstated by filing a Declaratory Judgment action in the Essex Superior Court. That court found in his favor, upholding the Commission's position that such personal use of an employer-supplied motor vehicle is includable in regular compensation. The Beverly Retirement Board and the Contributory Retirement Appeal Board (CRAB) both appealed to the Appeals Court. The briefing schedule concluded on Friday, August 31, 2007. The parties are now waiting to find out if and when the Appeals Court will hear oral arguments in the matter.

S T A F F D E V E L O P M E N T S

KEVIN BLANCHETTE APPOINTED WORCESTER REGIONAL EXECUTIVE DIRECTOR Former PERAC Deputy Assumes Key Board Position



Kevin P. Blanchette, former PERAC Deputy Executive Director of Operations, was recently named Executive Director/CEO of the Worcester Regional Retirement System. Mr. Blanchette, a graduate of Villanova University, has had a long and successful career in public service. Prior to his tenure at PERAC, he served from 1981 to 1993 as a Massachusetts State Representative, including as Chairman of the Joint Committee on Public Service which oversees pension and retirement issues.

He also served as Director of the Massachusetts Legislative Service Bureau.

One of Mr. Blanchette's historic accomplishments as Chairman was the enactment of Chapter 697 of the Acts of 1987. This Act provided for funding Massachusetts' unfunded pension liability for the first time and mandated that the 106 Massachusetts retire-

ment systems be fully funded by the year 2028. The importance of this Act cannot be overstated as Massachusetts retirement systems advance toward full funding.

While at PERAC, Mr. Blanchette oversaw several key operational departments, including: the Disability Unit, which coordinates medical examinations and reviews for both applicants for disability retirement and disability retirees; the Audit Unit, which conducts the statutorily-mandated triennial audits of all retirement systems; the Fraud Unit, which seeks to minimize pension fraud; and the Information Systems Unit, which provides state-of-the-art data processing for the entire agency.

PERAC's Executive Director Joseph E. Connarton wished Mr. Blanchette well as he embarked upon his new duties, "Kevin has been an integral part of PERAC's success since he joined the agency in 1999. He directed several key departments which are vital to the smooth functioning of the state's retirement systems. The Commission, I and all of PERAC's staff wish him continued success as he embarks on his new duties as Executive Director/CEO of the Worcester Regional Retirement System."

ACTING CHIEF AUDITOR APPOINTED

In another staff development, Executive Director Joseph E. Connarton is pleased to announce that Harold (Harry) Chadwick will serve as Acting Chief Auditor until a permanent chief auditor is named. Mr. Chadwick has served as an auditor at PERAC for some 10 years, joining the audit team in August 1997. His background also includes public sector experience as the County Treasurer and Chief Financial Officer of Hampshire County in Massachusetts. During that tenure, Mr. Chadwick also served as Chairman of the Hampshire County Retirement Board.

credit risk begin to increase, liquidity will generally contract. When liquidity diminishes, credit losses can be expected to worsen.

Encouraged by several years of low interest rates and the absence of major financial accidents, many investors used substantial leverage in hopes of enhancing their returns. Besides suffering magnified losses of capital, many of these players are now learning that when conditions change, the persistence of liquidity can be an illusion.

If there's one thing that can be learned from observing the financial markets over an extended period, it is that they often go to extremes. The crux of the recent volatility is that, in the markets related to lending, requirements for borrowing were liberalized to such an extreme degree in the early part of this decade that lenders were basically giving away money. Investors in search of higher returns found it easy—almost irresistible—to leverage their investments with additional borrowing. Then, in reaction to rising home loan defaults and other implications from this easy money period, many lenders became suddenly hesitant to lend money under virtually any circumstances. In contrast to the years when lenders were aggressively competing with each other to find potential borrowers, debt didn't just become more expensive but, for a brief time, it was scarcely available at any price on any terms.

In the view of many, the recent turmoil can be traced to the Federal Reserve, which kept short-term rates below actual inflation rates for an extended period in the aftermath of 9/11/01. The Fed's loose policy, combined with the narrowing of yield spreads between top and lower quality borrowers in the bond market, led to a virtual race for market share by lenders. The Fed's stance was successful in warding off the threat of deflation in the early part of this decade but it also had the effect of over-stimulating the housing market.

Even when the Fed began to raise short-term rates in June 2004 in an effort to take some of the fizz out of the housing market, long-term rates remained stubbornly low, resulting in a rare "inverted" yield curve. Former Chairman Alan Greenspan expressed concern that investors were accepting low returns for taking on risk. Besides noting that "newly abundant liquidity can readily disappear", he prophetically stated, "History has not dealt kindly with the aftermath of protracted periods of low risk premiums."

The problems arose first in the rapid expansion of the sub-prime mortgage market, where lenders were not always required to verify incomes of borrowers and, in some cases, no job, no income, or even any assets were required. These borrowers with poor credit histories and uncertain incomes were enabled to buy homes with adjustable rate mortgages characterized by high loan-to-value ratios and very low initial "teaser" rates. The sub-prime market was seen by most observers, including the

Federal Reserve, as a fine way to expand housing opportunities to families of lower financial status. Sub-prime lending rose quickly to about 20% of the total mortgage market by 2004, and Alt-A loans, a grade between prime and sub-prime, accounted for another 13% last year. About 45% of all sub-prime loans in 2006 went to borrowers who weren't required to document their income. All was well as long as housing prices continued to rise.

When the housing market began to decline across the country in 2006, thousands of these new borrowers began to lag on their payments and ultimately to default on their loans as they could no longer simply refinance them. As the implications of this debacle began to be apparent, many mortgage lenders went bankrupt, including New Century Financial Corporation, the nation's second largest sub-prime lender. Countrywide Financial Corp, the nation's largest mortgage lender representing about 17% of US home loans, found itself unable to access funds for new lending; it restricted new lending only to highly qualified buyers and ultimately accepted a \$2 billion infusion of cash from Bank of America and announced its intention to eliminate one fifth of its work force. With over two million loans expected to adjust to higher rates over the next two years, defaults within the mortgage industry are expected to increase. This fall, the Administration and Congress are expected to consider a number of proposals for some type of legislative relief that might help at least some borrowers avoid default.

Whether it was auto loans, credit cards, or similar products, lenders in general were making riskier loans because new financial instruments made it possible for them to lay off the risk of default on others. Wall Street created comparatively opaque financial instruments that shifted default risk from lenders to global investors. Securitization has been successfully employed in certain markets for decades and it has had its benefits in terms of making capital and capital-related investments widely available for both investors and borrowers. However, the markets for some securitized loans are relatively new, unregulated, and, until now, not severely tested.

Wall Street firms sliced and diced mortgages of various qualities into different tranches of CDOs (Collateralized Debt Obligations), each having a different level of risk and return. When sub-prime borrowers began to fall behind on their payments, the resulting default rates exceeded what investors in the mortgage pools had expected. Investors were further surprised when the tranches that were thought to contain the highest quality mortgages suffered greater-than-expected market declines. Overall, the prices of mortgage-related CDO's are estimated to have declined between 20-50% this year.

A major reason for the unexpected losses in mortgage-related CDOs was that investors didn't understand the true risks involved and market makers didn't know how to fairly value these instruments—even those that may have had only indirect or minor links to weak home loans. As the market basically froze

in August and there was little or no actual trading in these instruments or in related derivatives, it was difficult to mark them to market since there was essentially no market.

The rating agencies (Moody's, Standard & Poor's, Fitch, et al) are now being seen as complicit in the CDO fiasco since their practice was to give "AAA" ratings to these instruments with the rationale that the poor quality of underlying mortgages and the use of substantial leverage was offset by the over-collateralization of these securities. Somehow, low quality became high quality by the use of quantity. The high ratings made these products attractive to traditionally conservative investors such as commercial banks, insurance companies, and pension funds. The rating agencies have reviewed and lowered many of their ratings on securitized mortgage and other structured finance products in recent weeks, but these actions came too late for those investors who had previously bought them on the basis of the "AAA" ratings but who failed to do any independent analysis of their own and who downplayed actual risks by falsely assuming it was too spread out to affect them.

For the rating agencies, the recent housing and debt fiasco is not the first time that they have failed to accurately assess risk. Since these agencies are hired and paid by issuers and their Wall Street underwriters, credit market participants are increasingly assessing the implications of a business where the seller rather than the buyer hires the appraiser.

As usually happens during times of crisis, the losses in the CDO markets spilled over to others that were seemingly unrelated to mortgages, including that of CLOs (Collateralized Loan Obligations), which are collateralized and leveraged groups of bank loans made to corporations.

One of the affects of the proliferation of structured products is that it is not the banking system that holds the bulk of the defaulting and vulnerable mortgages but pension funds, hedge funds, and foreign investors. Indeed, many of the headlines during the recent instability have involved hedge funds. A few hedge funds—notably two funds managed by Bear Stearns and another run by Boston-based Sowood Capital Management—lost most or all of their assets as a result of untimely bets on the sub-prime mortgage market. Many other hedge funds with conservative strategies and little or no exposure to the mortgage debacle also experienced modest to moderate losses. These hedge funds with market neutral strategies make bets on perceived overvalued vs undervalued securities without having exposure to the overall direction of the market. When hedge funds began to de-lever their portfolios in anticipation of redemption requests, their course of action was not to sell those securities that they wanted to sell but those securities that they could most easily sell. Thus, many funds sought to sell their highest quality, most liquid stocks and, since so many hedge funds of this type had similar models, high quality stocks actually bore a greater brunt of the selling than lower quality stocks. At the same time, many of these funds

had to buy back stocks they were short, thus serving to increase the value of stocks they didn't fundamentally like. Many of the paper losses suffered by this type of hedge funds have begun to and will continue to reverse as the market returns to equilibrium and fundamental values return to the fore, but this episode does demonstrate the risks of having many funds that utilize quantitative models with similar methods and using the same data. One thing such models cannot adequately quantify is the effect of not just observing the market but of being a significant participant in it.

While hedge funds overall have so far weathered the current storm satisfactorily, the episode has illuminated some problems. First, even when hedge funds say they are pursuing entirely separate investment strategies, they often are seen as using common approaches, so that bets that go bad for one hedge fund can extend to others and disrupt the broader financial markets. Second, hedge funds typically invest in illiquid assets because the expected return of these assets exceeds that of liquid assets. When credit becomes tight, the downside of holding such assets becomes apparent. Third, many hedge funds deal heavily in derivative contracts for hedging or credit insurance purposes. These instruments can sometimes be difficult to value and can also be problematical when the counterparties for some of these contracts turn out to be other hedge funds.

Hedge fund assets under management have grown enormously in recent years and hedge funds now play a major role in many corners of the financial markets. Yet the true extent of their financial clout is not well understood, nor is there certainty about the stability of their sources of capital. Although the leading hedge funds and related products are run by some of the brightest and most sophisticated minds in the investment business, it is, nevertheless, unknown how the industry would react to conditions of severe market stress.

The dislocations in the equity market caused by hedge fund de-leveraging also impacted many 130/30 products and enhanced index strategies that were run by quantitative systems, causing these products to at least temporarily under-perform their benchmarks.

The private equity industry has also been mightily affected by the proliferation and subsequent elimination of easy money. Banks made funds so easily and readily available to private equity firms that buyers could hardly resist the lure of such terms. Not only did the banks offer low interest rates but they eliminated some provisions that protected the lender, increased the flexibility afforded to the borrower, and provided extra loans and bridge equity whenever needed. Empowered by these attractive debt terms, private equity managers could easily overpay by 5-10% in their buyout transactions. After the recent correction, a semblance of normalcy is returning to the market as higher interest rates, stricter covenants, and less availability of funds are making leveraged buyouts more difficult to accomplish. Reflecting the

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changed conditions, the stock of prominent private equity manager Blackstone Group's recent IPO fell 25% from its issue price. Many banks have committed to loans earmarked for leveraged buyouts that they hoped to distribute to investors but cannot under current conditions.

The spillover effects from the sub-prime mortgage debacle clearly affected the US stock market, which declined about 8% from its July record high before recovering by the end of August. The market also exhibited the highest volatility in four years as the Dow Jones Industrial Average had 14 days with triple digit moves. The fallout extended to rising interest rates for higher quality mortgage instruments and investment grade corporate debt, as well as losses in such seemingly unrelated asset classes as emerging markets. Issuance of high yield "junk bond" debt in August collapsed about 90% from levels earlier this year. The turbulence contributed to the severe correction already being experienced by Real Estate Investment Trusts. Perhaps most alarmingly, a number of money-market instruments and short-duration bond funds were affected when instruments related to low quality mortgages were found within their portfolios.

Partly because there is no real precedent for the current situation, it remains difficult to predict either the short-run or lasting effects of recent bad credit market bets on the economy or on the markets. The slowdown and weakness in the housing market has yet to run its course, and the task of de-leveraging by many leading financial institutions is also far from over. A disappointing employment report for August, indicating an actual loss of jobs, raised fears in early September that the effects on the overall

economy might be greater than originally thought. Moreover, the full extent of investment losses is not yet determined. Nevertheless, as time goes by, the investors who sought safety by rushing into Treasury bills and notes during the worst of the August turmoil will continue to gradually re-enter the stock and bond markets. A number of newly launched "vulture funds" have already begun to search for bargains in today's distressed debt landscape.

Although Chairman Ben Bernanke stated on August 31 that "It is not the responsibility of the Federal Reserve....to protect lenders and investors from the consequences of their financial decisions", the Fed reduced its discount rate by a half percent on August 17 in an effort to stimulate lending and it cut the federal funds rate by a similar amount on September 18. In announcing the first such reduction in over four years, the Fed's accompanying statement to its September action noted that "the tightening of credit conditions has the potential to intensify the housing correction and to restrain economic growth more generally."

Whatever the lasting effects of the recent turmoil, some valuable lessons will have been learned—lessons about the importance and true meaning of liquidity, lessons about some of the under-appreciated dangers of today's financially-engineered investment products, including how they are rated and how they are valued, lessons about the danger of going too far in relaxing conventional lending standards, and most of all, lessons about the persistence of risk and the importance of assessing risk premiums before lending money or making an investment.